

forming a first diffusion layer by means of implanting an impurity into the substrate while the gate interconnections are taken as a mask;

forming a second silicon film over the entire surface of the substrate so as to cover the gate interconnections, after formation of the first diffusion layer;

thermally-oxidizing the second silicon film, thereby forming a thermal oxide film with a bird's beak extending into the interface; and

forming an interlayer dielectric film on the thermal oxide film.

6. (Amended) A method of manufacturing a semiconductor device, comprising the steps of:

forming a gate oxide film on a substrate;

forming gate interconnections on the gate oxide film, each gate interconnection including a first silicon film, forming an interface with an upper surface of the gate oxide film, and a dielectric film;

forming a first diffusion layer by means of implanting an impurity into the substrate while the gate interconnections are taken as a mask;

forming, after formation of the first diffusion layer, a second silicon film over the side surfaces of the first silicon film;

thermally-oxidizing the second silicon film, thereby forming a thermal oxide film with a bird's beak extending into the interface; and

forming, after formation of the thermal oxide film, an interlayer dielectric film over the entire surface of the substrate so as to cover the gate interconnections.